

Gloria Blue, Executive Secretary,
Trade Policy Staff Committee,
Office of the USTR, 600 17th Street, NW
Washington, DC 20508
United States of America.

Dear Madam:

We have previously written a letter requesting you to consider a request from AltaSteel Ltd. to exclude “Grinding Rod” from import relief under section 203.

Please include this letter with our previous letter as it provides more specific details as to the chemistry and physical requirements of AltaSteel Grinding Rod.

AltaSteel Grinding Rod-used to crush and grind ore

AltaSteel is the only manufacturer of Heat Treated Grinding Rod in North America.

AltaSteel produces two different “Grinding Rod” products for the North American mining industry:

- 1.) High Carbon
 - i. ASTM A29 1090 Modified to ASTM A 576 Supplementary Requirements S14, S18
- 2.) Heat Treated Grinding Rod
 - i. AltaSteel HTR50 produced with a proprietary process to specific hardenability and hardness incorporating the supplementary requirements S6 and S11 of ASTM A322.
 - ii. AltaSteel HTR60 produced with a proprietary process to specific hardenability and hardness incorporating the supplementary requirements S6, S8, and S11 of ASTM A322.

AltaSteel Grinding Rods are supplied in diameters 3.000”, 3.500”, 4.000” up to 20’ in length. Grinding Rod is hot rolled from an 8” X 8” billet to ensure adequate reduction ratios and to produce a product with high levels of internal quality.

AltaSteel high carbon Grinding Rod grade is sold as a hot-rolled, carbon round. AltaSteel uses specific processing parameters to optimize rod wear rate and ensure survival in the harsh grinding environment.

AltaSteel Heat-Treated Grinding Rod (HTR50 and HTR60) grades are produced as hot-rolled, alloy rounds. During hot rolling, heat-treated grinding rod grades are produced using specific parameters to achieve desired final properties. After hot rolling, heat-treated grinding rod grades are subjected to a unique and proprietary heat treatment

process designed to achieve exceptional wear rate while surviving the harsh grinding environment.

These three grades are described at length below.

ASTM A29 1090 Modified to ASTM A 576 Supplementary Requirements S14, S18:

The 1090 grade produced by AltaSteel is produced to the chemical requirements of ASTM A29 1090 Modified, with the following typical chemistry.

| | |
|----|-------------|
| C | 0.85 - 0.98 |
| Mn | 0.60 - 0.90 |
| P | 0.040 max |
| S | 0.050 max |
| Si | 0.15 - 0.35 |

The 1090 grade has a typical through hardness of 30 R_c (see Comparison information).

AltaSteel HTR50 produced with a proprietary process to specific hardenability and hardness incorporating the supplementary requirements S6 and S11 of ASTM A322.

HTR50 is a grinding rod produced by AltaSteel using a patented process and composition to achieve consistent hardness properties after heat treatment.

Chemistry:

AltaSteel uses chemistry ranges designed to achieve consistent hardenability factors. Having a consistent hardenability factor results in uniform hardness properties after heat treatment. The hardenability factor and heat-treat parameters are designed to produce a hardness profile that has a high surface hardness (for increased wear) with a lower hardness core (to prevent breakage).

Typical Specifications:

1. Carbon content 0.65% to 0.75%
2. Minimum surface hardness of 50 R_c
3. Straightness of 1/2" over the length of the bar
4. Chemistry requirements
5. Quenching parameters

Typical Results:

AltaSteel performs periodic hardness measurements on the HTR50 bars with the following average results:

1. Surface - 54 R_c
2. 1/2" below surface - 47 R_c
3. Core - 39 R_c

4. Average volumetric hardness - 45 R_c
5. Hardness profile – see Comparison section

AltaSteel HTR60 produced with a proprietary process to specific hardenability and hardness incorporating the supplementary requirements S6, S8, and S11 of ASTM A322.

HTR60 is a patented grinding rod produced by AltaSteel using a process and composition to achieve hardness properties after heat-treatment that will exceed those of HTR50.

Chemistry:

AltaSteel uses chemistry ranges designed to achieve consistent hardenability factors. Having a consistent hardenability factor results in uniform hardness properties after heat treatment. The hardenability factor and heat-treat parameters are designed to produce a hardness profile that has a high surface hardness (for increases wear) with a lower hardness core (to prevent breakage).

Typical Specifications:

1. Carbon content 0.70% to 1.00%
2. Minimum surface hardness of 55 R_c
3. Straightness of 1/2" over the length of the bar
4. Chemistry requirements
5. Quenching parameters

Theoretical Results:

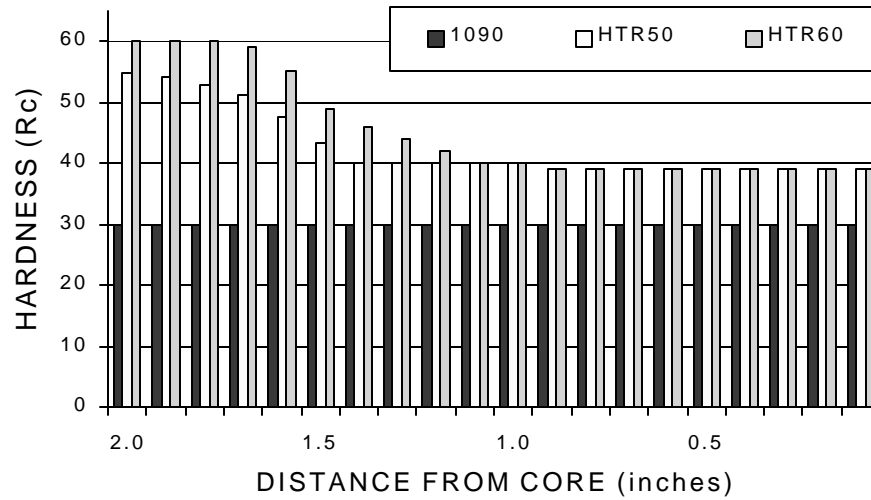
AltaSteel expects to see the following theoretical results from HTR60 bars:

1. Surface – 60 R_c
2. 1/2" below surface – 55 R_c
3. Core – 39 R_c
4. Average volumetric hardness – 50 R_c
5. Hardness profile – see Comparison section

Grinding Rod Comparisons:

Heat-treated rods contain lower carbon and higher alloy levels than 1090 rods. The heat-treated rods consist of a hard tempered martensite case with a tough bainite/pearlite core.

HARDNESS PROFILES



US Patent Numbers

AltaSteel produces heat-treated grinding rods to the following US patent numbers:

- 1.) 5,902,423 - Heat Treatment of Grinding Rod (HTR50)
- 2.) 5,972,135 – Stress Relieved Grinding Rod Having Hard Outer Shell (HTR60)
- 3.) 6,074,765 - Grinding Rod Chemistry and Method of Heat Treatment

Adam Brown
November 13, 2001